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**The Passing of the Great Blue Heron at Santa Monica.**—When I moved to Santa Monica in the fall of 1894 I had just about time to get used to the surroundings before the next collecting season, and found it the best outlook of any place I had ever been in. On the north are the Santa Monica mountains, on the south Ballona swamp and between the two a sloping mesa. Here, as one might expect, a great variety of birds is to be found.

On the north side of town, twenty-two miles distant, is a large canyon the bottom of which is completely covered with immense sycamores. Here on May 13, 1895 I found a colony of great blue herons nesting and counted in all about thirty-five nests, of which only three contained sets of four eggs each with incubation well advanced, a few young and the rest apparently deserted. The nests were placed in the tops of the tallest trees about seventy feet up and were composed entirely of sticks lined with a few sycamore leaves which I suppose fell into the nest from the branches above. The nests were as close together as nesting sites would permit and were all crowded in six or seven trees.

Every year the number of nests decreased until in 1900 only four nests were left, three of which were occupied, and in 1901 only one nest was to be seen and whether it was occupied or not I could not say as I only made one trip to the canyon. Next year I shall be surprised if any are there as the birds are being shot right along, although protected by the law. W. LEE, *Santa Monica, Cal.*

**A Correction**—The specimen upon which the record of *Colymbus auritus* from Mono Lake (CONDOR IV. p. 10) was based proves to be *Colymbus nigricollis californicus*. The bird is a young female and in some characters resembles *auritus*, but in its color and small size it is clearly referable to *californicus*. WALTER K. FISHER.

**Fall Distribution of the Western Robin**—In partial answer to Mr. Williams' inquiry in THE CONDOR Vol. III, No 6. I will state that *Merula m. propinqua* is very common along the low mountains of Sonoma and Mendocino counties in the months of August and September, when adults and young may be seen around the springs and cattle trough in good-sized flocks. In some years they are quite plentiful in Marin County, feeding on berries during the month of October, but I have never noted any at this time in juvenile plumage in this locality. Some years they seem to find food more plentiful elsewhere and do not come in here until well along into the winter. JOSEPH MAILLIARD, *San Geronimo, Cal.*

## COMMUNICATIONS.

Editor THE CONDOR:

Will you kindly publish the manuscript I send herewith. The editor of *Science* cannot see his way to printing my rejoinder to Professor Clark's article which appeared a few days since in his journal. It involves a very important point in the relationships of birds.

Yours very sincerely,

R. W. SHUFELDT,  
Fellow A. O. U.

### PTERYLOSIS OF HUMMINGBIRDS AND SWIFTS.

In a recent issue of *Science* (Jan. 17, 1902, pp. 108, 109) Professor Hubert Lyman Clark publishes some interesting notes on the comparative morphology of the swifts, goatsuckers and hummingbirds (*Cypseli*, *Caprimulgi* and *Trochili*.) In this article Professor Clark makes extensive reference to a memoir of mine on 'Studies of the Macrochires' published some twenty years ago by the Linnæan Society of London (1888), and it seems to me has left unnoticed a number of facts that certainly should have been noticed in his contribution.

The title to this latter asks the question "Are Hummingbirds Cypseloid or Caprimulgoid"? to which, by no means difficult ques-

tion, I would reply that the hummingbirds are neither like the swifts nor are they like the goatsuckers, and decidedly less like the latter than they are like the former. As I have fully examined the *entire anatomy* of all three of these groups, it would seem that I am as well if not better, prepared to answer such a question had I only examined their pterylography, even though the latter examination included examples of every species of swift, goatsucker and hummingbird in the world known to science.

But it is only the pterylography of these several groups of birds that concerns us here, as there is no evidence before me that Professor Clark has investigated any other part of their morphology. Now Professor Clark admits in his article in *Science* that he is familiar with the memoir contributed to the Proceedings of the Zoological Society of London for April 2, 1901, by Professor D'Arcy Thompson, entitled 'On the Pterylosis of the Giant Hummingbird (*Patagona gigas*)'. He admits that "No group of birds with which I am acquainted shows such remarkable uniformity in their pterylography as do the hummingbirds" (p. 109). Further, Professor Clark admits that "So far as I can see Professor Thompson's figures of *Patagona* would answer, almost without change for any of the 11 species I have examined;" he

also admits that he has examined pterylographically that peculiar swift *Callocalia*, together with a number of others.

He then states that "the posterior cervical apterium, so conspicuous in the hummingbirds, is present in every swift I have examined." He adds that "Dr. Shufeldt says it is *never* present in the swifts," to which I would reply that so far as I am aware Professor Clark and Mr. Lucas are the only ones who have ever found it there. He states in his article that Professor Thompson failed to find it in the swift *Callocalia*, to which I would further invite his attention to the fact that Nitzsch, the greatest known authority on the pterylography of birds, failed to find it in *Cypselus apus*, a form that perhaps may be regarded as the type of the swifts. (Pterlography. Taf. III. fig. 17). All this is the more remarkable inasmuch as Mr. F. A. Lucas has said that "Some of the swifts, too, possess the bare space on the back of the neck, and, while this is usually quite short, yet in the species that makes the edible nests (*Callocalia fuciphaga*) and which has a very long neck, the nape tract is also long." (Rep. Nat. Mus. 1890. p. 290).

Therefore Mr. Lucas and Professor Thompson disagree on this very point in the same genus of swifts! And, to make it still more confusing, Mr. Lucas, in the work just cited, gives us a figure of the pterylosis of a hummingbird (*Florisuga mellivora*) wherein the dorsal pterylosis is strikingly different from the dorsal pterylosis of a hummingbird (*Trochilus moschitus*) given us by Nitzsch (Taf. III. fig. 18. loc. cit.) and this places Mr. Lucas, to the extent of these differences, at variance with Professor Clark, who says that the pterylography of the hummingbirds "shows such remarkable uniformity" (p. 109, cited above). Nitzsch in his figure of a hummingbird gives the "humeral tracks" clear, distinct and well defined, while Mr. Lucas in his hummingbird has the dorsal aspects of the pectoral limbs *fully feathered*, all to a small, subcircular apterium over either humerus, where the humeral tracts of Nitzsch are drawn! In fact insofar as this area is concerned, the two figures are diametrically the opposite of each other. In this comparison I have not taken into consideration the naked black areas over the pinion of either limb, shown by Lucas but overlooked in the hummingbird by Nitzsch. Why Professor Clark asks the question as he does in the title of his article in *Science*, "Are Hummingbirds Cypseloid or Caprimulgoid?" is hard for me to say. It means to enquire whether hummingbirds are more like the swifts or more like the goatsuckers? Now only about a year ago Professor Clark admitted that "no sharp line can be drawn pterylographically between the *Caprimulgi* and the *Striges*, *Anurostomus* and

*Podargus* furnishing just such intermediate characters as might be expected from their size and habits." (*The Auk*, Apr. 1901, p. 170.) Surely Professor Clark sees nothing in the hummingbirds that leads him to believe that they have any close affinity with the owls (*Striges*)? If not, why ask the question whether hummingbirds are Caprimulgoid? I believe him to be perfectly correct in his opinion in regard to the affinity the owls have with the goatsuckers, and insofar as their pterylography goes no one could have demonstrated it better, but one must get the ancient picarian bee completely out of one's anatomical thinking-cap before cypselo-trochiline comparisons can be made without bias and without prejudice.

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## PUBLICATIONS RECEIVED.

(Receipt of individual contributions, and reviews will appear in May.)

*American Ornithology*, II, Nos. 2, 3, Feb., Mch. 1902.

*Birds & Nature*, XI, Nos. 1, 2, Jan. Feb., 1902.

*Bird Lore*, IV, No. I, Jan.-Feb., 1902.

*Jahresbericht des Ornithologischen Vereins-Munchen*, II, 1899 and 1900. Pub. 1901.

*Journal of the Maine Orn. Society*, IV, No. 1, Jan. 1902.

*Maine Sportsman* IX, Nos. 10, 11; Jan. Feb., 1902.

*Nature Study*, II, Nos. 8, 9, 10, Jan., Feb., Mch., 1902.

*Notes on Rhode Id. Ornithology*, III, No. 1, Jan. 1902.

*Novitates Zoologicae*, VIII, No. 4, Dec. 31, 1901.

*Ohio Naturalist*, II, Nos. 3, 4, Jan. Feb., 1902.,

*Oologist*, The, XIX, Nos. 1, 2, Jan. Feb., 1902.

*Ornithologisches Jahrbuch*, XIII, Nos. 1, 2, Jan.-Apl., 1902.

*Osprey, The*, V, Nos. 11-12. Nov. and Dec., 1901. New Series, I, No. 1, Jan. 1902.

*Our Animal Friends*, XXIX, No. 6, Feb. 1902.

*Our Dumb Animals*, XXXIV, Nos. 8, 9, Jan. Feb. 1902.

*Out West*, XVI, Nos. 1, 2, Jan. Feb. 1902.

*Plant World*, IV, No. 12, Dec. 1901. V, No. 1, Jan., 1902.

*Popular Science*, XXXVI, Nos. 2, 3, Feb. Mch., 1902.

*Recreation*, XVI, Nos. 1, 2, 3. Jan. Feb. Mch. 1902.

*West American Scientist*, XII, Nos. 8, 9, Jan. Feb. 1902.

*Wilson Bulletin*, No. 37, Dec. 1, 1901.